Thea's Bonus Page...

After reading and completing the challenge questions in the Nutrition Newsletter (Volume 4, Issue 2), you can try these questions.

Here are the two equations used to calculate energy needs for either males or females:

For males, total energy needs (in kcal) =
[66.5 + (13.8 x W) + (5 x H) – (6.8 x A)] x 1.6

For females, total energy needs =
[655.1 + (9.6 x W) + (1.9 x H) – (4.7 x A)] x 1.6

where W = your weight in kilograms (1 kilogram = 2.2 pounds)
H = your height in centimeters (1 inch = 2.54 centimeters)
A = your age in years

The Challenge:

Again, let's pretend that you are in charge of an astronaut's nutritional needs for a day.

1. Write the equation you used to calculate the total energy needs for a male astronaut who is 35 years old, weighs 180 pounds, and is 72 inches tall. What are his total energy needs (in kcal)?

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2. After the astronaut has been in space for a week, he fills out his food frequency questionnaire and reports that he consumed an average of 2108 kcal per day. Figure out what % of the recommended intake he actually consumed.

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3. How many more kcal would you recommend that he consume during his second week in space?

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4. Another astronaut reports that she consumed an average of 1850 kcal per day. She is 30 years old, weighs 115 pounds, and is 65 inches tall. What % of her recommended intake did she consume? Would you recommend that she eat more or less in the weeks to come?

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